REMARKS

Applicants hereby offer preliminary amendments to the present application to place the application in better form for allowance.

Applicants have canceled Claims 1-11 in favor of replacement Claims 12-23 to correct certain informalities (including the replacement of use Claim 10 with new method Claim 15), to clarify the intended meaning of the claims without altering their scope, and to add a method claim (i.e., new Claim 20) that specifies the particular amino monomer claimed in Claim 21. Applicants respectfully submit that the claims remain fully supported in the specification.

Applicants have added an Abstract that summarizes the subject matter of their invention. A copy of the new Abstract is separately attached.

In view of the preceding amendments and remarks, allowance of the claims is respectfully requested.

Respectfully submitted,

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ANNOTATED VERSION OF AMENDMENTS

IN THE CLAIMS:

The heading for the claims at page 19 , line 1, has been changed from "**Patent claims**" to --WHAT IS CLAIMED IS:--

Claims 1-11 have been canceled in favor of replacement Claims 12-23.

--12. A method for isolating nucleic acids from a sample containing nucleic acids comprising

(A) mixing, at a pH of 7 or less, the sample with a water-insoluble polymer that is not ionic in the basic and neutral range, is a bead polymer having an average particle size of from 3 to 100 µm, and consists of polymerized units of

(a) 5 to 98% by weight of amino monomer,

(b) 0.3 to 30% by weight of crosslinker, and

(c) 0 to 93% by weight of vinyl monomer,

thereby absorbing the nucleic acids,

(B) separating the water-insoluble polymer on which is absorbed the nucleic acids, and

(C) mixing the water-insoluble polymer with an aqueous phase with a pH of greater than 7, thereby liberating the adsorbed nucleic acids.

13. A method according to Claim 12 wherein the sample is a biological material that is lysed after step (A).

14. A method according to Claim 12 wherein the polymer is

(1) a water-insoluble, macroporous bead polymer that has an average particle size of from 3 to 100 µm and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consists of polymerized units of

(a) 5 to 98% by weight of amino monomer,

(b) 0.3 to 30% by weight of crosslinker, and

(c1) 0 to 93% by weight of hydrophobic vinyl monomer, or

(2) a bead polymer that is able to swell in water well, has an average particle size of from 3 to 100 µm, and consists of polymerized units of

(a) 5 to 79.5% by weight of amino monomer,

(b) 0.3 to 10% by weight of crosslinker, and

(c2) 10 to 93% by weight of hydrophilic vinyl monomer.

15. A method according to Claim 12 wherein the polymer is

(1) a water-insoluble, macroporous bead polymer that has an average particle size of from 3 to 100 µm, a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consists of polymerized units of

(a) 5 to 98% by weight of amino monomer,

(b) 2 to 30% by weight of crosslinker, and

(c1) 0 to 93% by weight of hydrophobic vinyl monomer, or

(2) a bead polymer that is insoluble in water but swellable in water, has an average particle size of from 3 to 100 µm, and consists of polymerized units of

(a) 5 to 79.5% by weight of amino monomer,

(b) 0.3 to 10% by weight of crosslinker, and

(c2) 10 to 93% by weight of hydrophilic vinyl monomer.

16. A water-insoluble, macroporous bead polymer that has an average particle size of from 3 to 100 µm, a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consists of polymerized units of

(a) 5 to 98% by weight of amino monomer,

(b) 2 to 30% by weight of crosslinker, and

(c1) 0 to 93% by weight of hydrophobic vinyl monomer.

17. A bead polymer that is insoluble in water but swellable in water, has an average particle size of from 3 to 100 µm, and consists of polymerized units of

(a) 5 to 79.5% by weight of amino monomer,

(b) 0.3 to 10% by weight of crosslinker, and

(c2) 10 to 93% by weight of hydrophilic vinyl monomer.

18. A method for preparing water-insoluble, macroporous bead polymers that have an average particle size of from 3 to 100 µm, a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g comprising

(1) dispersing, in an aqueous medium using a protective colloid, a mixture of

(a) 5 to 98 parts by weight of amino monomer,

(b) 2 to 30 parts by weight of crosslinker,

(c1) 0 to 93 parts by weight of hydrophobic vinyl monomer,

(d) 10 to 150 parts by weight of porogen, and

(e) 0.1 to 2.5 parts by weight of free-radical former,

(2) polymerizing the resulting dispersion by heating to the decomposition temperature of the free-radical former, and

(3) thereafter removing the porogen by extraction and/or evaporation.

19. A method for preparing bead polymers that are insoluble but swellable in water and have an average particle size of from 3 to 100 µm comprising

(1) dispersing, in an aqueous medium using a protective colloid, a mixture of

(a) 5 to 79.7% by weight of amino monomer,

(b) 0.3 to 10% by weight of crosslinker,

(c2) 10 to 93% by weight of hydrophilic vinyl monomer,

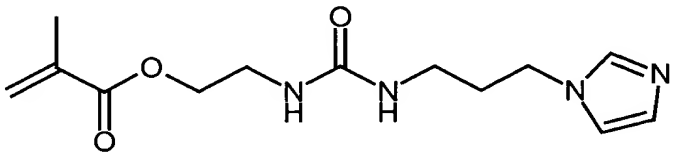
(d) 10 to 150 parts by weight of solvent, and

(e) 0.1 to 2.5 parts by weight of free-radical former

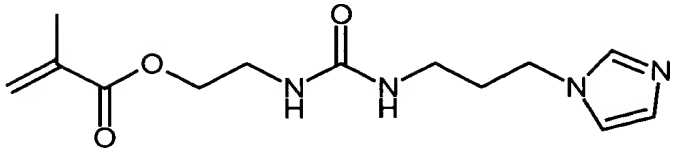
(2) polymerizing the resulting dispersion by heating to the decomposition temperature of the free-radical former, and

(3) thereafter removing the porogen by extraction and/or evaporation.

20. A method according to Claim 12 wherein the amino monomer is a compound of formula (I)


(I).

21. An amino monomer of formula (I)



(I).

22. A method for preparing the amino monomer of Claim 21 comprising reacting 2-isocyanatoethyl methacrylate with 3-aminopropylimidazole.

23. A composition for isolating nucleic acids from a sample from a sample containing nucleic acids comprising

(1) water-insoluble macroporous bead polymers that have an average particle size of from 3 to 100 µm, a pore diameter of from 10 to 1000 nm, and a specific surface area measured by the BET method of from 5 to 500 m^2/g and consist of polymerized units of

(a) 5 to 98% by weight of amino monomer,

(b) 2 to 30% by weight of crosslinker, and

(c1) 0 to 93% by weight of hydrophobic vinyl monomer, or

(2) bead polymers that are insoluble but swellable in water, have an average particle size of from 3 to 100 µm, and consist of polymerized units of

(a) 5 to 79.5% by weight of amino monomer,

(b) 0.3 to 10% by weight of crosslinker, and

(c2) 10 to 93% by weight of hydrophilic vinyl monomer.--

IN THE ABSTRACT:

An Abstract has been added as new page 24 as follows:

--WO 00/49031 PCT/EP00/01028

- 24 -

METHOD FOR ISOLATING NUCLEIC ACIDS

ABSTRACT OF THE DISCLOSURE

The invention relates to a method for isolating nucleic acids from a sample containing nucleic acids by

(A) mixing, at a pH of 7 or less, the sample with a water-insoluble polymer that is not ionic in the basic and neutral range, is a bead polymer having an average particle size of from 3 to 100 µm, and consists of polymerized units of

(a) 5 to 98% by weight of amino monomer,

(b) 0.3 to 30% by weight of crosslinker, and

(c) 0 to 93% by weight of vinyl monomer,

thereby absorbing the nucleic acids,

(B) separating the water-insoluble polymer on which is absorbed the nucleic acids, and

(C) mixing the water-insoluble polymer with an aqueous phase with a pH of greater than 7, thereby liberating the adsorbed nucleic acids.--